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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,396	03/17/2005	Gercon Vogtmeier	PHDE020202US	5043
38107	7590	03/23/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS			GAWORECKI, MARK R	
595 MINER ROAD			ART UNIT	
CLEVELAND, OH 44143			PAPER NUMBER	

2884

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/528,396

Applicant(s)

VOGTMEIER, GEREON

Examiner

Mark R. Gaworecki

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 6 is/are rejected.
- 7) ☒ Claim(s) 2, 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>17 March 2005</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 111. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 25. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wischmann *et al.* (US 2003/0020019) in view of Kobayashi *et al.* (6,600,160).

With respect to claim 1, Wischmann *et al.* teaches an x-ray detector comprising a plurality of detector units, including sensor elements (photosensor arrangement, 2b) and read-out circuits (12), arranged in a detector surface (converter layer, 2), as well as an x-ray shielding layer (13) between the sensor elements and the read-out circuits (Fig. 2). In this disclosure, Wischmann *et al.* provides no guidance as to the spatial arrangement of the sensor elements and read-out circuitry. While the sensor elements (2b) could be in alignment with the individual read-out circuits, Kobayashi *et al.* teaches an x-ray detector in which an x-ray shielding member (600) is at least in part arranged to protect an individual read-out circuit (MOS transistor). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the x-ray detector of Wischman *et al.* to specify that the individual read-out circuits (12)

were spatially separated transversely to the detection surface from the individual sensors 2b), since Kobayashi *et al.* shows that the arrangement was known and provides a detector of reduced height as desired by Wischmann *et al.* (see column 6, lines 30-33).

With respect to claim 3, the x-ray shielding member (13) disclosed by Wischmann *et al.* extends over several detection units (Fig. 2). The x-ray shielding layer (600) taught by Kobayashi *et al.* would extend over several detection units in the disclosed array.

With respect to claim 6, the x-ray detector suggested by Wischmann *et al.* and Kobayashi *et al.* would have a sensor element (2b) and the read-out circuit in element (12) offset parallel to the detection surface (2) in view of the suggestion of Kobayashi *et al.* (Fig. 20) as explained above.

#### ***Allowable Subject Matter***

5. Claims 2, 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claim 2, Wischmann *et al.* (2003/0020019) teaches the use of a x-ray shielding layer (13) located between the detection elements (2b) and the read-out circuitry (12), but fails to show an interruption in this layer through which a signal connection can be made.

With respect to claims 4 and 5, Wischmann *et al.* (2003/0020019) teaches the use of an x-ray shielding layer (13), but fails to teach the use of transverse

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absorption units in this layer to separate adjacent read-out circuits. Kobayashi *et al.* (6,600,160) teaches the use of an x-ray shielding member (600) to cover the read-out circuitry (Fig. 20), but also fails to teach the use of transverse absorption units.

Thus, these limitations are not disclosed, suggested, or rendered obvious by the prior art of record.

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to radiation and x-ray detectors:

U.S. Pat. No. 5,742,060 to Ashburn

U.S. Pat. No. 4,213,137 to Pines

U.S. Pat. No. 5,355,013 to Parker

U.S. Pat. No. 5,041,729 to Takahashi *et al.*


U.S. Published Pat. App. No. 2002/0130266 to Kyyhkynen

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Gaworecki whose telephone number is (571) 272-8540. The examiner can normally be reached on Monday through Friday, 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MG  
3/15/06



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